Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method for configuring a microcontroller comprising:

a) accessing a description of hardware resources of said microcontroller;

b) selecting available configurations of said hardware resources of said microcontroller, wherein said selecting produces a selected configuration;~~and~~

c) generating configuration information corresponding to said selected configuration; and

c3) generating an interrupt vector table for use by embedded software, wherein a plurality of interrupts included in said interrupt vector table are generated by said selected configuration.

2. (Original) The method according to Claim 1 wherein said description of the hardware resources of said microcontroller comprises a text readable data structure.

3. (Original) The method according to Claim 2 wherein said text readable data structure is substantially compliant with extensible markup language.

4. (Original) The method according to Claim 1 further comprising:

a1) accessing predetermined configurations of said hardware resources, wherein said predetermined configurations are user modules.

5. (Original) The method according to Claim 4 further comprising:

b1) selecting said user modules to produce said selected configuration.

6. (Original) The method according to Claim 1 further comprising:

      c1) generating microprocessor instructions for using said configuration information to configure said microcontroller.

7. (Original) The method according to Claim 1 further comprising:

      c2) generating application programming interface calls for embedded software.

8. (Original) The method according to Claim 7 wherein said application programming interface calls are named according to names given to configurations of said hardware resources.

9. (Canceled).

10. (Original) The method according to Claim 1 further comprising:

      d) tracking said selected configuration; and

      e) informing the user if said selected configuration is achievable using said hardware resources.

11. (Original) A method for configuring a microcontroller containing a plurality of dynamically configurable blocks comprising:

      a) accessing a description of said dynamically configurable blocks, wherein said dynamically configurable blocks can be configured to produce a variety of functions;

      b) selecting available configurations of said dynamically configurable blocks, wherein said selecting produces a selected configuration; and

      c) generating configuration information corresponding to said selected configuration.

12. (Original) The method according to Claim 11 wherein said description of said dynamically

configurable blocks is substantially compliant with extensible markup language.

13. (Original) The method according to Claim 11 further comprising:

a1) accessing predetermined configurations of said dynamically configurable blocks,

wherein said predetermined configurations are user modules.

14. (Original) The method according to Claim 13 further comprising:

b1) selecting said user modules to produce said selected configuration.

15. (Original) The method according to Claim 11 further comprising:

c1) generating microprocessor instructions for using said configuration information to

configure said dynamically configurable blocks.

16. (Original) The method according to Claim 11 further comprising:

c2) generating application programming interface calls for embedded software.

17. (Original) The method according to Claim 16 wherein said application programming

interface calls are named according to names given to configurations of said hardware resources.

18. (Original) The method according to Claim 11 further comprising:

c3) generating an interrupt vector table for use by embedded software, wherein a plurality

of interrupts included in said interrupt vector table are generated by said selected

configuration.

19. (Original) The method according to Claim 11 further comprising:

d) editing said description to reflect changes in said plurality of dynamically configurable blocks.

20. (Original) The method according to Claim 11 further comprising:

e) adding a file to a directory to enable the use of a new hardware configuration of said microcontroller.

21. (Original) The method according to Claim 11 further comprising:

f) adding a file to a directory to enable the user of a new user module.

22. (Currently Amended) A system comprising:

a processor coupled to a bus;

a memory coupled to said bus and wherein said memory contains instructions that when executed on said processor implement a method for configuring a microcontroller, said method comprising:

a) accessing a description of ~~hardware resources~~ a plurality of dynamically configurable blocks of said microcontroller, wherein said dynamically configurable blocks can be configured to produce a variety of functions;

b) selecting available configurations of said ~~hardware resources of said microcontroller~~ dynamically configurable blocks, wherein said selecting produces a selected configuration; and

c) generating configuration information corresponding to said selected configuration.

23. (Currently Amended) A system as described in Claim 22 wherein said description of ~~hardware resources~~ said plurality of dynamically configurable blocks comprises a text readable data structure.

24. (Original) A system as described in Claim 23 wherein said text readable data structure is substantially compliant with extensible markup language.

25. (Currently Amended) A system as described in Claim 22 wherein said method further comprises:

   a1) accessing predetermined configurations of said ~~hardware resources~~ plurality of dynamically configurable blocks, wherein said predetermined configurations are user modules.

26. (Original) A system as described in Claim 22 wherein said method further comprises:

   b1) selecting said user modules to produce said selected configuration.

27. (Original) A system as described in Claim 22 wherein said method further comprises:

   c1) generating microprocessor instructions for using said configuration information to configure said microcontroller.

28. (Original) A system as described in Claim 22 wherein said method further comprises:

   c2) generating application programming interface calls for embedded software.

29. (Currently Amended) A system as described in Claim 28 wherein said application programming interface calls are named according to names given to configurations of said ~~hardware resources~~ plurality of dynamically configurable blocks.

30. (Currently Amended) A computer usable medium having computer readable code stored thereon for causing a computer system to perform a method for configuring a microcontroller, said method comprising:

   a) accessing a description of hardware resources of said microcontroller;

b) selecting available configurations of said hardware resources of said microcontroller, wherein said selecting produces a selected configuration; ~~and~~

c) generating configuration information corresponding to said selected configuration;

d) generating an interrupt vector for use by embedded software, wherein a plurality of interrupts included in said interrupt vector table are generated by said selected configuration.

31. (original) The computer usable medium as described in Claim 30 wherein said description of hardware resources comprises a text readable data structure.

32. (original) The computer usable medium as described in Claim 31 wherein said text readable data structure is substantially compliant with extensible markup language.

33. (original) The computer usable medium as described in Claim 30 wherein said method further comprises:

a1) accessing predetermined configurations of said hardware resources, wherein said predetermined configurations are user modules.

34. (original) The computer usable medium as described in Claim 30 wherein said method further comprises:

b1) selecting said user modules to produce said selected configuration.

35. (original) The computer usable medium as described in Claim 30 wherein said method further comprises:

c1) generating microprocessor instructions for using said configuration information to configure said microcontroller.

36. (original) The computer usable medium as described in Claim 30 wherein said method further comprises:

      c2) generating application programming interface calls for embedded software.

37. (original) The computer usable medium as described in Claim 36 wherein said application programming interface calls are named according to names given to configurations of said hardware resources.

38-41. (Canceled).